

### **Amendments to the Claims**

This listing of claims will replace the originally filed claims in the application.

#### **Listing of Claims:**

Claims 1 – 7 (cancelled)

Claim 8 (new):           An apparatus for separating at least one component of a gas mixture by pressure swing adsorption, comprising, in a generally vertical vessel comprising an upper dome, at least one adsorbent mass separating a first vertical chamber receiving the gas mixture to be separated, from a second vertical chamber collecting a separated gas mixture, a generally horizontal flexible wall being pressed against the upper end of the adsorbent mass by pressing means, wherein it comprises means for controlling the pressure in the volume between the flexible wall and the dome.

Claim 9 (new):           The apparatus of claim 8, wherein the volume between the flexible wall and the dome communicates with one of said first and second chambers.

Claim 10 (new):          The apparatus of claim 8, wherein it further comprises means for ballasting the flexible wall.

Claim 11 (new):          The apparatus of claim 9, wherein it comprises a line connecting said volume to the second chamber.

Claim 12 (new):          The apparatus of claim 9, wherein it comprises a passage between said volume and the first chamber.

Claim 13 (new):          The apparatus of claim 8, wherein the adsorbent mass is annular, and the first and second chambers are concentric.

Claim 14 (new):          The apparatus of claim 8, for separating components of air, the adsorbent comprising at least one zeolite.